

IX.—WATER TEMPERATURES.

The extremes of the temperature of the water, as observed at the Signal Service Stations, are given in the table on the accompanying chart No. III.

X.—ELECTRICAL PHENOMENA.

(1.) *Lightning*.—The general distribution of atmospheric electricity, so far as it accompanies local thunder-storms, has been given in a previous section. The relation of the phenomena of lightning and thunder-storms in general to the general areas of low pressure may be seen from the following statement:

The area of low pressure, No. VII, central on the morning of the 25th, near Lake Huron, had moved by the morning of the 26th to a position near Quebec, the central barometric pressure having diminished decidedly during the 25th. Local thunder-storms are reported on the afternoon of the 25th from nearly every station in the Gulf States, Tennessee, Virginia, the Middle Atlantic coast, southern New England and Lake Ontario.

On the 24th, area No. VII passed over the Upper Lake region. On the afternoon of that day thunder-storms were reported from nearly every station in New Mexico, Colorado, northern Texas, the upper Mississippi valley, the Upper Lake region and Lake Erie.

On the 20th, area No. VI passed over the Lower Lake region, and on the same day thunder-storms were reported from numerous stations between the Blue Ridge and Middle Atlantic coast.

On the 21st, low barometer No. VI passed over New England, and numerous storms were reported from the Eastern Gulf and South Atlantic States and southern portions of New England and the Middle States.

Of special electrical phenomena, the record of the station on the summit of Pike's Peak affords remarkable instances. Those noted at that place on the 24th are among the most instructive and interesting on record. The summit of the mountain was evidently highly charged, and discharges were continually given off from every prominent point into the atmosphere and to the adjacent clouds, the only position of safety being within the stone hut occupied by the observers.

(2.) *Auroras*.—An unusually large number of auroras has been reported during the month, but those that have been seen were extremely faint and insignificant. They were observed on the following dates: 1, 3, 4, 5, 11, 12, 13, 14, 15, 17, 18, 20, 21, 24, 26, 27.

(3.) *Ground currents*.—The phenomena of ground currents on telegraphic wires, common as it is on the lines running up Mt. Washington and Pike's Peak, was especially noticed at the latter station on the 20th and 24th.

XI.—OPTICAL PHENOMENA.

Solar and lunar halos have been very frequently reported, but appear not to have possessed such interesting characteristics as those of April.

The lunar halo of the 22d was very generally visible throughout the Northwest, the Lake region and the Ohio and Tennessee valleys. A solar halo was recorded on the 23d at numerous stations in the Middle Atlantic States and in New York, and a lunar halo in the evening of the same day in the Middle and Eastern States.